



**PATENT**  
Attorney Docket No. 175912  
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Boyd

Art Unit: 1648

Application No. 09/427,873

Examiner: J. Parkin

Filed: October 27, 1999

For: METHOD OF USING  
CYANOVIRINS TO INHIBIT  
VIRAL INFECTION

**PENDING CLAIMS AFTER AMENDMENTS  
MADE IN RESPONSE  
TO OFFICE ACTION DATED JULY 30, 2002**

20. A method of inhibiting binding of an enveloped virus to a cell in a host, which method comprises administering to the host an antiviral effective amount of an isolated and purified antiviral agent selected from the group consisting of an antiviral protein, an antiviral peptide, an antiviral protein conjugate, and an antiviral peptide conjugate, wherein said antiviral protein or antiviral peptide has an amino acid sequence of SEQ ID NO: 2 or an antiviral fragment thereof comprising at least nine contiguous amino acids of SEQ ID NO: 2, whereupon administration of said antiviral effective amount of said antiviral agent, binding of the enveloped virus to the cell is inhibited.

21. The method of claim 20, wherein said antiviral protein comprises the amino acid sequence of SEQ ID NO: 2.

NM 22. The method of claim 20, wherein said antiviral protein conjugate or said antiviral peptide conjugate comprises (i) an amino acid sequence of SEQ ID NO: 2 or an antiviral fragment thereof comprising at least nine contiguous amino acids of SEQ ID NO: 2, and (ii) an isolated and purified viral envelope glycoprotein.

NM 23. The method of claim 22, wherein said antiviral protein comprises the amino acid sequence of SEQ ID NO: 2.

CV-N: 101AA

NM 24. The method of claim 22, wherein said isolated and purified viral envelope glycoprotein is an isolated and purified retroviral envelope glycoprotein.

NM 25. The method of claim 24, wherein said isolated and purified retroviral envelope glycoprotein is an isolated and purified immunodeficiency viral envelope glycoprotein.

NM 26. The method of claim 25, wherein said isolated and purified immunodeficiency viral envelope glycoprotein is an isolated and purified viral envelope glycoprotein of HIV-1 or HIV-2.

NM 27. The method of claim 26, wherein said isolated and purified viral envelope glycoprotein of HIV-1 or HIV-2 comprises gp120.

NM 28. The method of claim 20, wherein said antiviral protein conjugate or said antiviral peptide conjugate comprises (i) an amino acid sequence of SEQ ID NO: 2 or an antiviral fragment thereof comprising at least nine contiguous amino acids of SEQ ID NO: 2, and (ii) a virus.

NM 29. The method of claim 28, wherein the virus is a retrovirus.

NM 30. The method of claim 29, wherein the retrovirus is an immunodeficiency virus.

NM 31. The method of claim 30, wherein the immunodeficiency virus is HIV-1 or HIV-2.

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AMENDMENTS TO CLAIMS MADE  
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*Amendments to the existing claims:*

20. (Twice Amended) A method of inhibiting [therapeutically or prophylactically a viral infection of] binding of an enveloped virus to a cell in a host, which method comprises administering to the host an antiviral effective amount of an isolated and purified antiviral agent selected from the group consisting of an antiviral protein, an antiviral peptide, an antiviral protein conjugate, and an antiviral peptide conjugate, wherein said antiviral protein or antiviral peptide has an amino acid sequence of SEQ ID NO: 2 or [a mutant] an antiviral fragment thereof comprising at least nine contiguous amino acids of SEQ ID NO: 2, whereupon administration of said antiviral effective amount of said antiviral agent, [said viral infection of said host] binding of the enveloped virus to the cell is inhibited,

22. (Twice Amended) The method of claim 20, wherein said antiviral protein conjugate or said antiviral peptide conjugate comprises (i) an amino acid sequence of SEQ ID NO: 2 or an antiviral fragment [a mutant] thereof comprising at least nine contiguous amino acids of SEQ ID NO: 2, and (ii) an isolated and purified viral envelope glycoprotein. *W.D.*

*(101 AA)*

28. (New) The method of claim 20, wherein said antiviral protein conjugate or said antiviral peptide conjugate comprises (i) an amino acid sequence of SEQ ID NO: 2 or an

*W.D. - For comparison*

antiviral fragment thereof comprising at least nine contiguous amino acids of SEQ ID NO: 2, and (ii) a virus.

29. (New) The method of claim 28, wherein the virus is a retrovirus.

30. (New) The method of claim 29, wherein the retrovirus is an immunodeficiency virus.

31. (New) The method of claim 30, wherein the immunodeficiency virus is HIV-1 or HIV-2.